



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/076,956	05/13/1998	LUDMILLA BARANOVA	GEN-T104D1	5479

7590 05/07/2003

MARGARET M. WALL
SWANSON BRATSCUN, L.L.C.
1745 SHEA CENTER DRIVE #330
HIGHLANDS RANCH, CO 80129

EXAMINER

CRANE, LAWRENCE E

ART UNIT	PAPER NUMBER
----------	--------------

1623

48

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/076,956	Applicant(s) Baranova et al.	
	Examiner L. E. Crane	Group Art Unit 1623	

- THE MAILING DATE of this communication appears on the cover sheet beneath the correspondence address -

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE **--3--** MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be filed after six months from the date of this communication.
- If the prior for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 USC §133).

Status

- ☒ Responsive to communication(s) filed on **-11/07/02 (amdt J)-**.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claims **--110-113--** are pending in the application. Claims **-104-107-** have been cancelled. Of the above claim(s) **--[]--** is/are withdrawn from consideration.
- ☐ Claim(s) **--[]--** is/are allowed.
- ☒ Claims **--110-113--** are rejected.
- ☐ Claim(s) **--[]--** is/are objected to.
- ☐ Claim(s) **--[]--** are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on **-[]-** is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on **-[]-** is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119(a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☒ All ☐ Some ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) **-[]-**.
- ☒ received in the national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: **-[]-**.

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). **--41, 44--**
- ☒ Interview Summary, PTO-413, P.N. **38**.
- ☒ Notice of Reference(s) Cited, PTO-892 (Update)
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☒ Other: **-Annotated copies, pp. 20-21-**

U.S. Patent Trademark Office

Office Action Summary

PTO-326 (Rev. 06/19/01)

S. N. 09/076,956

Paper No. **45**

Copy for ☒ **FILE** ☐ **APPLICANT**

Art Unit 1623

The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group 1600, Art Unit 1623.

5 Claims **104-107** have been cancelled, no claims have been amended, and new claims **110-113** have been entered as per the amendment/RCE of November 7, 2002. Two Information Disclosure Statements (IDSs) have been received with all cited references and made of record.

10 Claims **110-113** remain in the case.

The disclosure is objected to because of the following informalities:

Examiner notes the replacements for pages 20-22 submitted by applicant. While these pages represent a substantial improvement, there remain some important technical errors in need of correction:

- 15 i) Examiner assumes that the first compound in Scheme 1 is "(A)" ("Nucleoside attached to the support"), and if so, wonders why it is not so labeled;
- ii) if the first compound in Scheme 1 is "(A)," then "Trityl" needed to be amended to read -- 4, 4'-Dimethoxytrityl -- or -- DMT -- with an
- 20 associated definition for the acronym;
- iii) if the first compound in Scheme 1 is "(A)," then the second product in Scheme 1 is -- 4, 4'-dimethoxytrityl cation --, and therefore, must have a positive -- (+) -- ionic charge;
- iv) if the second compound in Scheme 2 is compound "(B)," examiner
- 25 wonders why it is not so labeled, and if so, suggests that the term "Trityl" in the second compound and the corresponding term in the product should be replaced by the term -- 4, 4'-dimethoxytrityl -- or

Art Unit 1623

-- DMT --; and

v) the compounds in Scheme 3 are assumed to be a mixture being transformed into a second mixtures with one product "capped," and therefore is missing -- + -- signs to show that mixtures of starting materials and products are present.

Examiner has included annotated copies of pages 20 and 21 with the instant Office action to provide applicant with additional guidance. Page 22 appears to be correct and complete as submitted.

Appropriate correction is required.

Claim 110 is rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

In claim 110 at line 10, the last Markush group member (halogen) is not properly enabled because its "nucleophilicity" is typically known in the art to occur when the halogen occurs as an anion (e.g. iodide ion in the Finkelstein reaction), but is not well known to occur under the aqueous conditions of oligonucleotide cleavage from a solid support.

Examiner does not know of any examples wherein a neighboring (β) halo substituent act as a nucleophile, except in the absence of a neighboring leaving group. Because applicant has not provided any examples wherein a halogen acts as a nucleophile, deletion of this Markush group member along with appropriate amendment of the Markush group accordingly is respectfully requested.

Claims 110 and 113 are objected to because of the following informalities:

Art Unit 1623

In claim 110 at line 9, the term "NH₂" is incomplete; said term should read -- -NH_2 --.

Claim 113 lacks terminal punctuation.

Appropriate correction is required.

5 Claims 110-113 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10 In claim 110 at lines 10 and 11, the terms "AC" and "Ac" are misleading because of inappropriate capitalized "C" in the first case, and because the second term is commonly used to represent "acetyl" exclusively. Examiner suggests that applicant use the term -- C₁₋₇ acyl -- in the line formulas in place of both Ac and AC. See also claim 111 at lines 2 and 3, wherein the substituted term should be -- C₁₋₄ acyl --.

15 The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections made under this section in this Office action:

A person shall be entitled to a patent unless --

20 (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

25 Claims 110-113 are rejected under 35 U.S.C. §102(b) as being anticipated by Webb et al. '774 (PTO-892 ref. B).

Art Unit 1623

Applicant is referred to column 2. line 60 and column 3, line 60 wherein compounds included within the scope of instant structures (I) and (I') have been disclosed.

5 This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. §103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. §1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. §103(c) and potential 35 U.S.C. §§102(f) or (g) prior art under 35 U.S.C. §103(a).

15 Papers related to this application may be submitted to Group 1600 via facsimile transmission(FAX). The transmission of such papers must conform with the notice published in the Official Gazette (1096 OG 30, November 15, 1989). The telephone numbers for the FAX machines operated by Group 1600 are (703) 308-4556 and 703-305-3592.

20 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner L. E. Crane whose telephone number is 703-308-4639. The examiner can normally be reached between 9:30 AM and 5:00 PM, Monday through Friday.

25 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson, can be reached at (703)-308-4624.

Serial No. 09/076,956

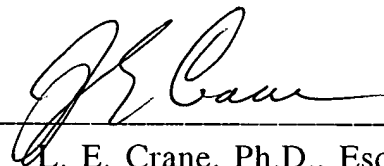
6

Art Unit 1623

Any inquiry of a general nature or relating to the status of this application should be directed to the Group 1600 receptionist whose telephone number is 703-308-1235.

LECrane:lec

5 01/02/03

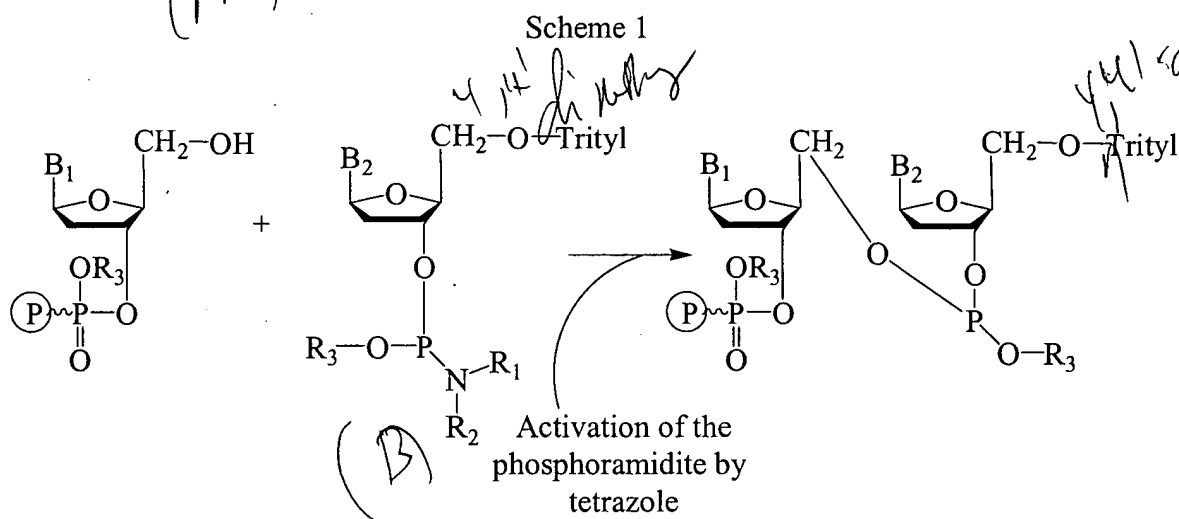
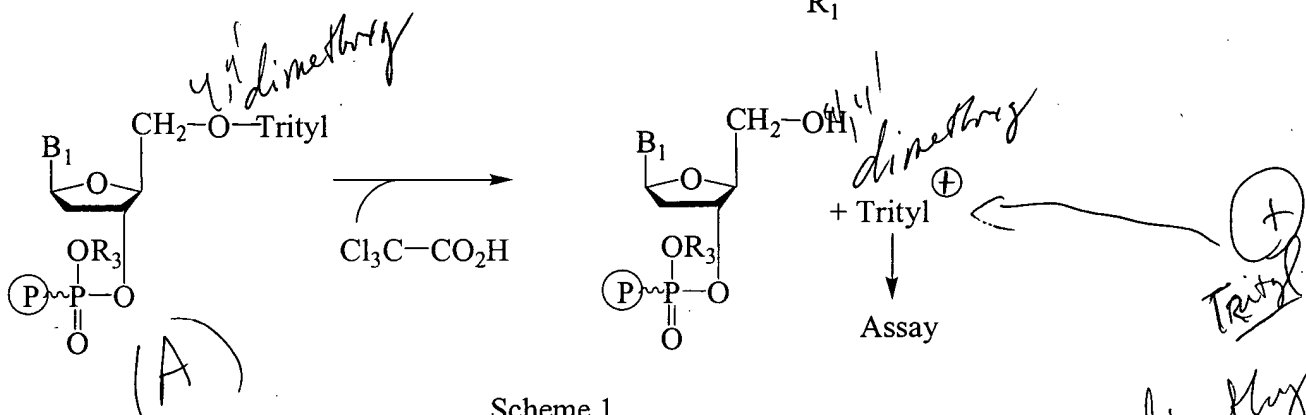


L. E. Crane, Ph.D., Esq.

Patent Examiner

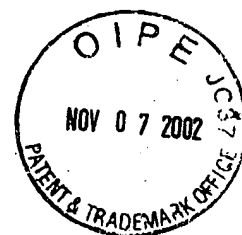
Technology Center 1600

Phosphoramidite:

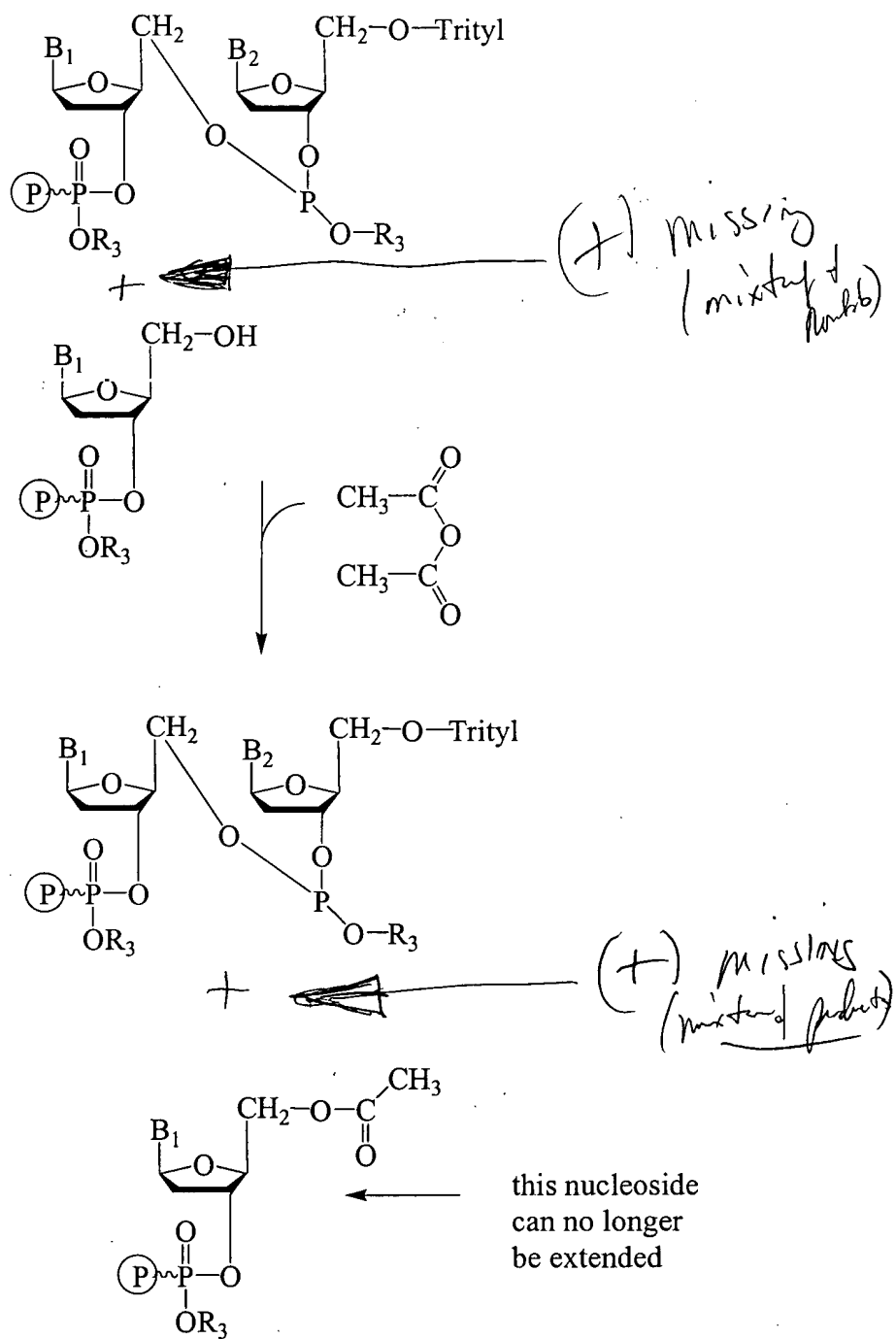


Scheme 2

DUPLICATE



2) Capping:



Scheme 3

DUPLICATE

